

INDUCTIVE HEATING OF MICROELECTRONIC COMPONENTS

ABSTRACT OF THE DISCLOSURE

A method for heat-treating a plurality of microelectronic structures attached to a non-metallic substrate is disclosed. Each of the plurality of microelectronic structures is comprised of a metallic material, and ones of the plurality of metallic microelectronic structures are insulated from other ones of the plurality of microelectronic structures. An application of the method is for heat-treatment of resilient microstructures. The method comprises the steps of: (a) placing the non-metallic substrate and the plurality of microelectronic structures in an oscillating electromagnetic field, whereby the plurality of microelectronic structures are heated by the oscillating electromagnetic field and the non-metallic substrate is essentially not heated by the oscillating electromagnetic field; (b) maintaining the non-metallic substrate and the plurality of microelectronic structures in the oscillating electromagnetic field until each of the plurality of microelectronic structures obtains a defined heat-treatment temperature substantially greater than an ambient temperature; (c) removing the non-metallic substrate and the plurality of microelectronic structures from the oscillating electromagnetic field; and (d) cooling the plurality of microelectronic structures to the ambient temperature.